

# (12) United States Patent Ishida

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### (54) PULLEY STRUCTURE

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#### (57)**ABSTRACT**

A drive pulley structure has a cylindrical pulley member, a hub structure that is provided inside the pulley member so as to rotate relative to the pulley member, a coil spring that is fixed to the hub structure, a tapering which has a conical round surface as of a cone whose axis is made up of a rotational axis J of the hub structure, and a frictional member that is inserted to be interposed between the conical round surface of the tapering and the pulley member, and the coil spring is inserted to be interposed in place while being compressed in the direction of the rotational axis of the hub structure, the tapering, the frictional member and the pulley member being brought into press contact with each other by virtue of a restoring force P of the coil spring.

# 6 Claims, 7 Drawing Sheets

